Amendment to the Claims

The following listing of claims replaces all prior claim versions and listings for this application:

1-7. (Cancelled)

8. (Currently Amended) A synthetic peptide capable of eliciting antibodies to p53, which peptide is 7 to 30 amino acid residues in length and contains a sequence of a CDR of the heavy or light chain of an anti-p53 mAb, and salts and chemical derivatives thereof.

9. (Currently Amended) A synthetic peptide according to claim 8, containing a sequence of the CDR2 or CDR3 of the heavy chain, or of the CDR3 of the light chain, of an anti-p53 mAb ~~selected from mAb 240, 246 and 421, said peptide being selected from the group consisting of:~~

~~(i) peptides, herein designated Ia-Ib, based on the CDR2 and CDR3, respectively, of the heavy chain (240VH), and peptide Ic based on the CDR3 of the light chain (240VL), of the anti-p53 mAb 240, of the sequences: (Ia) Glu-Ile-Asp-Pro-Ser-Asp-Ser-Tyr-Thr-Asn-Tyr-Asn-Gln-Asn-Phe-Lys-Asp (SEQ ID NO:9), (Ib) Leu-Leu-Arg-Tyr-Phe-Ala-Met-Asp-Tyr (SEQ ID NO:10), or (Ic) Gln-His-Ile-Arg-Glu-Leu-Thr-Arg (SEQ ID NO:11);~~

~~(ii) peptides, herein designated IIa-IIb, based on the CDR2 and CDR3, respectively, of the heavy chain (246VH), and peptide 11c based on the CDR3 of the light chain (246VL), of the anti-p53 mAb 246, of the sequences: (IIa) Asp-Ile-Asn-Pro-Asn-Asn-Gly-Tyr-Thr-Ile-Tyr-Asn-Gln-Lys-Val-Lys-Gly (SEQ ID NO:12), (IIb) Gly-Gly-Gly-Leu-Lys-Gly-Tyr-Pro-Phe-Val-Tyr (SEQ ID NO:13), or (IIc) Gln-Gln-Arg-Ser-Ser-Phe-Pro-Phe-Thr (SEQ ID NO:14);~~

~~(iii) peptides, herein designated IVa-IVb, based on the CDR2 and CDR3, respectively, of the heavy chain (421VH), and peptide IVc based on the CDR3 of the light chain (421VL), of the anti-p53 mAb 421, of the sequences: (IVa) Trp-Ile-Asp-Pro-Glu-Asn-Gly-Asp-Thr-Glu-Tyr-Ala-Pro-Lys-Phe-Gln-Gly (SEQ ID NO:18), (IVb) Tyr-Gly-Asp-~~

~~Ala-Leu-Asp-Tyr (SEQ ID NO:19), or (IVc) Trp-Gln-Gly-Thr-His-Ser-Pro-Leu-Thr (SEQ ID NO:20); and~~

~~salts thereof~~.

10. (Currently Amended) A synthetic peptide according to claim 18 [[9]], wherein the peptide contains a sequence selected from the group of sequences consisting of Ic (SEQ ID NO:11), IIa (SEQ ID NO:12), and IVc (SEQ ID NO:20).

11. (Currently Amended) A synthetic peptide according to claim 10, wherein the peptides are selected from the group consisting of peptides V-IX of the sequences:

Peptide V: Tyr-Tyr-Cys-Gln-His-Ile-Arg-Glu-Leu-Thr-Arg-Ser-Glu-Gly-Gly-Pro-Ser ~~SEQ ID NO:21~~ (SEQ ID NO:21),

Peptide VI: Gly-Val-Tyr-Tyr-Cys-Trp-Gln-Gly-Thr-His-Ser-Pro-Leu-Thr-Phe-Gly-Ala-Gly-Thr-Lys ~~SEQ ID NO:22~~ (SEQ ID NO:22),

Peptide VII: Gly-Asp-Ile-Asn-Pro-Asn-Asn-Gly-Tyr-Thr-Ile-Tyr-Asn-Gln-Lys-Val-Lys-Gly-Lys-Ala ~~SEQ ID NO:23~~ (SEQ ID NO:23), and

salts thereof.

12. (Previously Presented) A synthetic peptide according to claim 8, wherein the peptide contains the sequence: Gln-His-Ile-Arg-Glu-Leu-Thr-Arg (SEQ ID NO:11) or Tyr-Tyr-Cys-Gln-His-Ile-Arg-Glu-Leu-Thr-Arg-Ser-Glu-Gly-Gly-Pro-Ser (SEQ ID NO:21).

13-16. (Cancelled)

17. (Previously Presented) The peptide of claim 8 in the form of an organic or inorganic salt thereof.

18. (New) The peptide of claim 9, wherein the sequence of the CDR is selected from mAb 240, 246 and 421.

19. (New) The peptide of claim 18, wherein the peptide is selected from the group consisting of:

(i) peptides, herein designated Ia-Ib, based on the CDR2 and CDR3, respectively, of the heavy chain (240VH), and peptide Ic based on the CDR3 of the light chain (240VL), of the anti-p53 mAb 240, of the sequences: (Ia) Glu-Ile-Asp-Pro-Ser-Asp-Ser-Tyr-Thr-Asn-Tyr-Asn-Gln-Asn-Phe-Lys-Asp (SEQ ID NO:9), (Ib) Leu-Leu-Arg-Tyr-Phe-Ala-Met-Asp-Tyr (SEQ ID NO:10), or (Ic) Gln-His-Ile-Arg-Glu-Leu-Thr-Arg (SEQ ID NO:11);

(ii) peptides, herein designated IIa-IIb, based on the CDR2 and CDR3, respectively, of the heavy chain (246VH), and peptide 11c based on the CDR3 of the light chain (246VL), of the anti-p53 mAb 246, of the sequences: (IIa) Asp-Ile-Asn-Pro-Asn-Asn-Gly-Tyr-Thr- Ile-Tyr-Asn-Gln-Lys-Val-Lys-Gly (SEQ ID NO:12), (IIb) Gly-Gly-Gly-Leu-Lys-Gly-Tyr-Pro-Phe-Val-Tyr (SEQ ID NO:13), or (IIc) Gln-Gln-Arg-Ser-Ser-Phe-Pro-Phe-Thr (SEQ ID NO:14);

(iii) peptides, herein designated IVa-IVb, based on the CDR2 and CDR3, respectively, of the heavy chain (421VH), and peptide IVc based on the CDR3 of the light chain (421VL), of the anti-p53 mAb 421, of the sequences: (IVa) Trp-Ile-Asp-Pro-Glu-Asn-Gly-Asp-Thr- Glu-Tyr-Ala-Pro-Lys-Phe-Gln-Gly (SEQ ID NO:18), (IVb) Tyr-Gly-Asp-Ala-Leu-Asp-Tyr (SEQ ID NO:19), or (IVc) Trp-Gln-Gly-Thr-His-Ser-Pro-Leu-Thr (SEQ ID NO:20); and

salts thereof.

20. (New) A pharmaceutical composition comprising the peptide of claim 8 and a pharmaceutically acceptable carrier.

21. (New) The pharmaceutical composition of claim 20, wherein the peptide contains a sequence of the CDR2 or CDR3 of the heavy chain, or of the CDR3 of the light chain, of an anti-p53 mAb.

22. (New) The pharmaceutical composition of 21, wherein the peptide contains the sequence: Gln-His-Ile-Arg-Glu-Leu-Thr-Arg (SEQ ID NO:11) or Tyr-Tyr-Cys-Gln-His-Ile-Arg-Glu-Leu-Thr-Arg-Ser-Glu-Gly-Gly-Pro-Ser (SEQ ID NO:21).

23. (New) The pharmaceutical composition of claim 21, wherein the peptide sequence of the CDR is selected from mAb 240, 246 and 421.

24. (New) The pharmaceutical composition of claim 23, wherein the peptide is selected from the group consisting of:

(i) peptides, herein designated Ia-Ib, based on the CDR2 and CDR3, respectively, of the heavy chain (240VH), and peptide Ic based on the CDR3 of the light chain (240VL), of the anti-p53 mAb 240, of the sequences: (Ia) Glu-Ile-Asp-Pro-Ser-Asp-Ser-Tyr-Thr-Asn-Tyr-Asn-Gln-Asn-Phe-Lys-Asp (SEQ ID NO:9), (Ib) Leu-Leu-Arg-Tyr-Phe-Ala-Met-Asp-Tyr (SEQ ID NO:10), or (Ic) Gln-His-Ile-Arg-Glu-Leu-Thr-Arg (SEQ ID NO:11);

(ii) peptides, herein designated IIa-IIb, based on the CDR2 and CDR3, respectively, of the heavy chain (246VH), and peptide 11c based on the CDR3 of the light chain (246VL), of the anti-p53 mAb 246, of the sequences: (IIa) Asp-Ile-Asn-Pro-Asn-Asn-Gly-Tyr-Thr- Ile-Tyr-Asn-Gln-Lys-Val-Lys-Gly (SEQ ID NO:12), (IIb) Gly-Gly-Gly-Leu-Lys-Gly-Tyr-Pro-Phe-Val-Tyr (SEQ ID NO:13), or (IIc) Gln-Gln-Arg-Ser-Ser-Phe-Pro-Phe-Thr (SEQ ID NO:14);

(iii) peptides, herein designated IVa-IVb, based on the CDR2 and CDR3, respectively, of the heavy chain (421VH), and peptide IVc based on the CDR3 of the light chain (421VL), of the anti-p53 mAb 421, of the sequences: (IVa) Trp-Ile-Asp-Pro-Glu-Asn-Gly-Asp-Thr- Glu-Tyr-Ala-Pro-Lys-Phe-Gln-Gly (SEQ ID NO:18), (IVb) Tyr-Gly-Asp-Ala-Leu-Asp-Tyr (SEQ ID NO:19), or (IVc) Trp-Gln-Gly-Thr-His-Ser-Pro-Leu-Thr (SEQ ID NO:20); and

salts thereof.

25. (New) The pharmaceutical composition of claim 23, wherein the peptide contains a sequence selected from the group of sequences consisting of Ic (SEQ ID NO:11), IIa (SEQ ID NO:12), and IVc (SEQ ID NO:20).

26. (New) The pharmaceutical composition of claim 25, wherein the peptides are selected from the group consisting of peptides V-IX of the sequences:

Peptide V: Tyr-Tyr-Cys-Gln-His-Ile-Arg-Glu-Leu-Thr-Arg-Ser-Glu-Gly-Gly-Pro-Ser (SEQ ID NO:21),

Peptide VI: Gly-Val-Tyr-Tyr-Cys-Trp-Gln-Gly-Thr-His-Ser-Pro-Leu-Thr-Phe-Gly-Ala-Gly-Thr-Lys (SEQ ID NO:22),

Peptide VII: Gly-Asp-Ile-Asn-Pro-Asn-Asn-Gly-Tyr-Thr-Ile-Tyr-Asn-Gln-Lys-Val-Lys-Gly-Lys-Ala (SEQ ID NO:23), and

salts thereof.

27. (New) The pharmaceutical composition of claim 20, further comprising one or more different peptides, wherein the different peptide is capable of eliciting antibodies to p53 and contains a sequence of a CDR of the heavy or light chain of an anti-p53 mAb, and salts and chemical derivatives thereof.

28. (New) The peptide of claim 8, obtained by a process which comprises:

identifying a first monoclonal anti-p53 antibody capable of generating anti-idiotope anti-p53 antibodies in a subject immunized with the first antibody;

identifying at least one sequence of a CDR of the first anti-p53 mAb, wherein the sequence is a CDR2 or CDR3 of the heavy chain of the first anti-p53 mAb, or the CDR3 of the light chain of the first anti-p53 mAb; and

synthesizing peptides or salts or chemical derivatives thereof that contain the CDR sequence such that the peptides, salts, or derivatives thereof are capable of eliciting antibodies to p53 upon administration to a subject.